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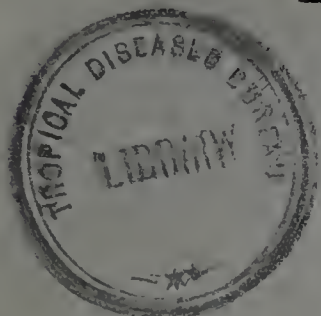
SHORT NOTES ON VACCINATION

IN

BIHAR AND ORISSA

FOR THE YEAR

1923-24



BY

LT.-COL. W. C. ROSS, M.B., CH.B., D.P.H., I.M.S.,

Director of Public Health, Bihar and Orissa.



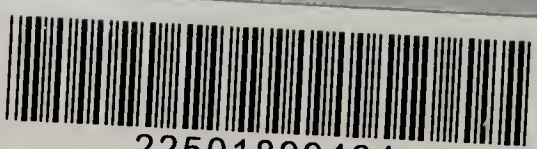
PATNA :

PRINTED BY SUPERINTENDENT, GOVERNMENT PRINTING, BIHAR AND ORISSA
1924.

Price—Indian 10 annas.

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1923-24

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ANNUAL VACCINATION REPORT BIHAR AND ORISSA FOR THE YEAR

1923-24.

1. *Staff*.—LT.-COL. W. C. Ross, I.M.S., held charge of the department throughout the year and submits this report.

The three Assistant Directors of Public Health remained in charge of their respective circles during the year except that Dr. J. L. Das officiated for Dr. B. P. Mazumdar for two months whilst he was on leave. Otherwise Dr. T. Sebastian remained in charge of the North Bihar Circle, Dr. S. N. Tiwari of the Chota Nagpur and Orissa Circle and Dr. B. P. Mazumdar of the South Bihar Circle throughout the year.

The Inspecting Staff consisted of 20 District Inspectors of vaccination and 69 Sub-Inspectors of Vaccination (including three deputed for duty at the Vaccine Depôt) in addition to the one Sub-Assistant Surgeon combining vaccination inspection with other duties in Angul. The total number of vaccinators employed in the province during the year was 1,088 licensed and 228 paid, against 1,089 licensed and 222 paid in the previous year.

In municipalities and in the district of Puri, vaccination was done by paid vaccinators ; but otherwise the work throughout the province was carried out under the licensing system, except for the employment of paid vaccinators by District Boards, and employed temporarily by Civil Surgeons for short periods to deal with outbreaks of small-pox.

2. *Operations performed*.—The total number of operations performed during the year amounted to 1,043,264 as compared with 1,002,889 last year. There has again been an increase in the total number of operations which is very satisfactory, and indicates that the difficulties and the opposition experienced in 1920 and 1921 are gradually diminishing. Of the total number of operations in the province 1,031,904 were performed by the staff of the Vaccination Department as compared with 988,601 last year. Nine hundred and ninety-nine thousand, seven hundred and eighteen operations were primary and 32,186 were re-vaccinations as against 965,666 primary operations and 22,935 re-vaccinations last year.

There was an increase of 34,052 in the number of primary operations and of 9,251 in the number of re-vaccinations during the year. Of the total operations performed (1,031,904), 1,010,911 equal to 97·96 per cent. were successful, as compared with 972,003 equal to 98·32 last year.

The number of operations performed in municipalities increased by 4,213 as compared with last year's returns. The total number of operations performed was 39,937 and the number of successful operations was 35,918 of which 32,833 were primary and 3,085 were re-vaccinations as compared with 28,963 and 3,502 respectively last year. The ratios of success in municipalities were 97·25 per cent. for primary operations and 49·94 per cent. for re-vaccinations as compared with 96·77 per cent. and 60·41 per cent., respectively, last year.

The number of operations performed in rural areas was 991,967 as compared with 952,877 last year and the ratios of successes were 99·33 per cent. for primary operations and 59·44 for re-vaccinations.

3. *Vaccination in Districts*.—Of the three districts of the Patna Division, Gaya and Shahabad reported an increase in the number of operations performed (4,270) and (663) whilst Patna reported a decrease of over 1,000.

There was a general increase in the number of operations reported from all the districts of the Tirhut Division.

Tirhut Division.

The districts of the Bhagalpur Division recorded small increases except Purnea in which a decrease of 4,058 was reported. Monghyr District recorded the highest increase in this division, viz., 7,519.

Bhagalpur Division,

With the exception of Cuttack all the districts of Orissa recorded increases in the number of operations, the greatest increase being in Balasore (8,104).

Orissa Division.

With the exception of Singhbhum there was a general rise in the number of operations returned from the districts of Chota Nagpur, the greatest increase being in Manbhum (5,304).

Chota Nagpur Division.

4. *Vaccination in Towns and Compulsory areas.*—Statement VII shows that during the year 15,278 children under one year of age, out of an available number of 30,292 or 50.43 per cent. were successfully vaccinated.

The towns of Monghyr, Bhagalpur, and Darbhanga, show the smallest proportion of work done, and the towns of Chapra and Cuttack also made unsatisfactory returns.

5. *Work done in the Native States under the supervision of the Political Agent and Commissioner.*—Vaccination work in the Orissa Feudatory States has steadily developed during recent years under the direction and encouragement of the Political Agent and Commissioner.

Both vaccination and to a large extent re-vaccination are practically compulsory in the majority of these States.

During the year under report 195,641 primary operations and 240,805 re-vaccinations were performed as compared with 145,836 and 283,289 respectively, in the previous year.

6. *Protection of infants.*—During the year under report the number of children under one year available for vaccination was 1,034,163 and the number of successful operations was 375,127 equal to 362 per thousand against 358,558 or 331 per thousand successful operations out of 1,081,900 children available during the previous year. The protection of infants in municipalities is separately shown in statement VII. It gives a ratio of 504 per thousand of the surviving infant population as compared with 452 in the previous year.

These figures are unsatisfactory in as much as they show that far more than half of the total number of operations is performed on children over one year of age. Civil Surgeons and Assistant Directors of Public Health are unanimous in attributing the opposition to vaccination to be concerned more with the age of the child, than with the operation itself, and, in view of the strong popular prejudice which exists against the vaccination of infants at an early age, I consider that it is desirable that the Vaccination Act should be amended, so as to raise the age for compulsory vaccination to one year instead of six months.

7. *Incidence and mortality of small-pox.*—During the last ten years the total number of deaths from small-pox in the districts of this province has been 95,628.

During the first quinquennium the number of deaths was 43,241 and during the second 49,387. In each of the last five years the mortality was as follows:—18,514, 19,374, 4,911, 2,695 and 3,893. The graphs published in the Annual Public Health Report indicate that there is a definite, though

slightly irregular periodic variation in the epidemic prevalence of small-pox and it is probable that we have just passed through the period of least prevalence, and are entering upon a period of increasing epidemic prevalence. I consider it likely that the prevalence of small-pox will increase materially during the next two or three years and that there is likely to be a severe epidemic of small-pox in the province in 1926 or 1927.

The provincial ratios of the mortality from small-pox per thousand of population during the last five years have been .53, .56, .14, .07 and .11.

8. *Prevention of small-pox.*—The constant and considerable mortality noted in the preceding paragraph is, in my opinion, a complete demonstration both of the insufficiency and of the inefficiency of the existing arrangements for vaccination.

It is wellknown in fact it is an admitted axiom—that thorough vaccination can and does stamp out small-pox altogether, and in the light of that knowledge, and in face of the above facts, there is great necessity for a more definite vaccination policy.

I do not consider that small-pox can be effectively dealt with and stamped out unless vaccination is made compulsory throughout the Province, and I would recommend that the Vaccination Act should be modified so as to extend the age within which vaccination is required, to one year, and should be generally enforced; that vaccination should be free; and that the supervision and control of vaccination should be delegated to District Boards and Municipalities and their Health Officers.

9. *Inspection of work.*—During the year under report the Assistant Directors of Public Health inspected 71,814 primary vaccinations as against 70,006 in the previous year.

The inspecting work done by the Assistant Directors of Public Health has been comprehensive and they have submitted valuable reports on the efficiency of the staff and work in 20 out of the 21 districts in the Province.

The Civil Surgeons of the Province inspected 40,985 primary and 4,686 re-vaccination operations against 29,181 primary and 9,303 re-vaccinations last year.

It should be noted that the methods of inspection of Civil Surgeons and Assistant Directors of Public Health are different. Civil Surgeons inspect the new work which has just been done and the numbers returned by them are therefore smaller, whereas Assistant Directors of Public Health inspect all the children under ten years of age, and look at old work as well as new work, and also look for unvaccinated children and children who are marked with small-pox, and they also examine vaccinators' registers and other records in the villages where they can be verified and checked.

10. *Supply of Vaccine.*—The Vaccine Depot at Namkum supplied the province with vaccine throughout the year. A large supply of vaccine is held in reserve and the necessary stores and supplies for manufacture are in ample stock. Five millions, three hundred and fifty-seven thousand and twenty-five doses of vaccine were manufactured during the year as compared with 1,426,146 doses last year. The number of doses issued was 2,564,754 against 2,576,743 in 1922-23. The number of doses in stock at the end of the year was 5,590,353. The number of cattle used during the year was 792 as compared with 246 in the previous year, and the average yield of crude vaccine was over 63 grammes per animal as compared with 59 grammes in the previous year. The working cost of the depot for the year amounted to Rs. 25,545 as compared with Rs. 33,206 in the previous year. The average cost of the vaccine per dose works out at .91 pies on the gross expenditure and to .34 pies on the nett expenditure, when the receipts are taken into account.

11. *Vaccine Depot and Cold Storage.*—During the year under report the vaccine depot suffered less than usual from epidemic diseases although there was one slight epidemic of Foot and Mouth disease. Owing to the difficulty in getting a sufficient supply of calves at reasonable rates Dr. Tiwari has tried using adult animals with results which have so far been satisfactory. The adult animals are cheaper and more robust, and they gave a large quantity of

vaccine. Three new isolation sheds and a dipping trough have been constructed during the year and the grazing ground of the vaccine dépôt has been fenced with wire-fencing and sub-divided into paddocks so as to allow of the effective segregation of different batches of cattle and of sick animals.

The cold storage, which is essential for the preservation and ripening of the large stocks of vaccine, had been working badly for some time and broke down in October. In November a new compressor was started, but the old oil engine is now giving trouble and it is necessary that a new duplicate engine should be installed.

Throughout the year, cholera vaccine and influenza vaccine were stocked in the dépôt and issued throughout the Province as required.

12. *Experimental Work.*—During the year under report experimental work has been carried out with regard to the use of adult animals instead of calves with very satisfactory results so far.

Experiments were also made in the use of .05 per cent. of iodine to purify the vaccine. The vaccine was kept in cold storage for twelve months after the iodine solution had been added and then tested. It gives satisfactory results in the vaccination of both children and rabbits, and plate cultures made from this vaccine show no contaminating colonies.

13. *Cost of the Department.*—The total cost of the Vaccination Department (excluding the Vaccine Dépôt) during the year, as detailed in Statement II, was Rs. 1,52,980 or Rs. 1,509 less than the previous year.

The cost per successful operation was 2 annas 4 pies against 2 annas 6 pies in the previous year.

14. *Personal.*—In conclusion, I desire to bring to the notice of Government the work of the three Assistant Directors of Public Health. Doctor T. Sebastian and Doctor B. P. Mazumdar have carried out their inspecting duties satisfactorily. Doctor C. N. Banarji has also worked satisfactorily as Superintendent of the Vaccine Dépôt.

W. C. ROSS,
Lieut.-Col., I.M.S.,
Director of Public Health.

STATEMENT I.

STATEMENT No. I.—Showing particulars of Vaccination in the

Number.	District.		Population of district according to the census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary
						Male.	Female.	Total.		Total.
1	2		3	4	5	6			7	8
Patna Division.										
1	Patna	By paid Vaccinators ...	1,574,287	761	18	4,631	4,198	8,829	490	8,630
		By licensed Vaccinators ...			63	27,397	26,146	53,543	849	53,542
2	Gaya	By paid Vaccinators ...	2,152,030	457	16	2,903	2,827	5,730	358	5,701
		By licensed Vaccinators ...			81	23,314	21,875	45,289	559	45,187
3	Shahabad	By paid Vaccinators ...	1,816,821	415	25	3,625	3,058	6,683	267	6,680
		By licensed Vaccinators ...			113	28,710	24,216	52,926	468	52,926
Total of Patna Division										
		By paid Vaccinators ...	5,544,038	497	50	11,159	10,083	21,242	360	21,011
		By licensed Vaccinators ...			257	79,421	72,337	151,758	590	151,655
Tirhut Division.										
4	Saran	By paid Vaccinators ...	2,339,953	872	8	1,302	1,185	2,487	311	2,418
		By licensed Vaccinators ...			79	36,692	34,271	70,963	898	70,933
5	Champaran	By paid Vaccinators ...	1,940,841	549	4	2,228	1,360	3,528	882	2,262
		By licensed Vaccinators ...			66	21,166	20,871	42,037	637	41,962
6	Muzaffarpur	By paid Vaccinators ...	2,754,945	907	12	1,771	1,388	3,159	263	2,782
		By licensed Vaccinators ...			79	45,827	43,504	89,331	1,131	89,324
7	Darbhanga	By paid Vaccinators ...	2,913,529	870	7	1,206	1,239	2,445	349	2,331
		By licensed Vaccinators ...			88	46,855	44,846	91,701	1,042	90,524
Total of Tirhut Division										
		By paid Vaccinators ...	9,049,268	789	31	6,537	5,112	11,619	375	9,843
		By licensed Vaccinators ...			312	150,540	143,492	294,032	942	292,743
Bhagalpur Division.										
8	Monghyr	By paid Vaccinators ...	2,029,065	518	7	1,143	1,055	2,198	314	2,092
		By licensed Vaccinators ...			30	34,350	34,400	68,750	2,292	68,734
9	Bhagalpur	By paid Vaccinators ...	2,033,770	481	12	4,376	2,490	6,766	564	4,365
		By licensed Vaccinators ...			63	29,027	28,618	58,545	929	58,416
10	Purnea	By paid Vaccinators ...	2,024,608	405	11	1,219	651	1,870	170	1,181
		By licensed Vaccinators ...			53	17,649	16,507	34,156	644	33,902
11	Santal Parganas	By paid Vaccinators ...	1,798,639	329	8	3,666	2,625	6,291	786	4,499
		By licensed Vaccinators ...			57	26,036	25,051	51,087	896	50,084
Total of Bhagalpur Division.										
		By paid Vaccinators ...	7,886,982	423	38	10,304	6,821	17,125	451	12,137
		By licensed Vaccinators ...			203	107,962	104,576	212,538	1,047	211,136
Orissa Division.										
12	Cuttack	By paid Vaccinators ...	2,064,678	565	10	2,941	2,543	5,484	548	2,837
		By licensed Vaccinators ...			60	21,982	20,099	42,081	701	41,389
13	Balasore	By paid Vaccinators ...	980,504	470	6	3,350	1,645	4,995	832	992
		By licensed Vaccinators ...			32	15,893	12,299	28,197	881	27,418
14	Angul	By licensed Vaccinators ...	182,574	112	12	3,230	3,127	6,357	530	6,320
15	Puri	By paid Vaccinators ...	951,651	380	29	20,956	17,646	38,002	1,310	35,882
16	Sambalpur	By paid Vaccinators ...	789,466	206	5	146	100	246	45	239
		By licensed Vaccinators ...			34	12,071	11,510	23,581	693	23,574
Total of Orissa Division										
		By paid Vaccinators ...	4,068,873	361	50	27,393	21,334	48,727	974	39,950
		By licensed Vaccinators ...			138	53,181	47,035	100,216	726	98,701

districts of Bihar and Orissa during the year 1923-24.

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2,332	5,727	8,310	50	199	111	2	96·85	55·42	39·12	·57	4·52	66,883	42·42	1,375	·67
16,720	33,175	52,798	143	1	1	...	98·87	100·		·26	...				
2,523	2,993	5,667	7	29	16	...	99·52	55·17	23·75	·12	...	54,695	25·40	822	·38
17,475	26,296	45,071	26	102	23	25	99·80	29·87		·65	21·50				
3,500	2,660	6,650	7	3	1	...	99·65	32·33	32·85	·10	...	54,846	30·18	402	·22
29,708	10,246	52,842	14	...	...	...	99·86	...		·02	...				
8,355	11,389	20,627	64	231	128	9	98·47	57·65	30·93	·30	9·89	176,424	31·82	2,599	·46
63,883	78,717	150,711	183	103	24	25	99·49	30·78		·12	24·27				
1,527	671	2,226	34	69	37	2	93·37	55·22	30·96	1·49	2·89	61,172	26·14	777	·33
17,706	49,557	69,920	363	30	20	2	99·08	71·42		·51	6·66				
825	1,229	2,158	31	1,266	761	216	96·72	72·47	23·23	1·37	17·06	43,398	24·93	378	·14
11,118	33,472	41,906	16	75	57	2	99·00	78·08		·03	2·66				
932	1,761	2,713	3	377	284	18	97·62	79·10	33·42	·10	4·77	86,268	31·31	196	·07
16,874	71,663	88,977	28	7	5	...	99·64	71·42		·03	...				
586	1,772	2,360	...	64	34	4	99·11	56·66	32·14	...	6·25	89,097	30·58	273	·09
12,932	77,374	90,415	7	1,177	842	...	99·88	71·53		·007	...				
3,870	5,433	9,457	63	1,776	1,116	240	96·74	72·65	30·42	·69	13·51	284,935	28·63	1,524	·15
58,680	229,066	291,218	419	1,289	924	4	99·62	71·90		·14	·31				
997	1,050	2,060	4	106	23	5	93·64	27·72	34·89	·19	4·71	57,733	28·44	353	·17
17,391	50,413	68,733	...	16	7	...	99·99	43·75		...	...		
1,643	2,515	4,301	39	2,401	1,523	110	99·42	66·47	32·18	·89	4·58	60,072	29·53	332	·16
24,461	33,673	58,374	19	129	92	9	99·96	76·65		·03	6·97				
554	583	1,127	19	689	278	143	96·98	50·01	17·39	1·60	20·75	46,379	22·00	1,198	·59
15,024	18,659	33,759	10	254	54	...	99·60	21·26		·02	...				
2,120	2,281	4,443	21	1,792	845	382	99·23	59·92	31·18	·46	21·31	48,497	26·93	311	·17
28,441	21,294	49,887	100	1,003	657	50	99·80	68·94		·19	4·98				
5,314	6,469	11,934	83	4,988	2,674	640	99·00	61·49	28·67	·68	12·83	212,691	26·96	2,194	·27
85,817	124,039	210,753	129	1,402	810	59	99·87	60·31		·15	4·20				
899	1,722	2,787	36	2,647	1,311	350	99·59	57·07	22·29	1·26	13·22	52,161	26·16	979	·47
16,500	22,791	41,313	65	692	193	114	99·57	33·91		·15	16·47				
284	602	967	12	4,003	1,951	932	98·67	63·52	30·79	1·20	23·82	84,120	24·59	371	·37
6,875	18,529	26,990	141	779	267	247	98·94	53·94		·51	31·70				
2,857	3,244	6,133	42	37	26	3	97·69	76·47	33·73	·36	8·10	5,406	29·60	47	·25
11,108	21,293	35,184	514	2,120	1,048	315	99·47	58·06	38·23	1·43	15·85	35,562	37·33	418	·43
182	55	237	...	7	...	6	99·16	...	30·09	...	85·71	17,268	21·87	161	·20
18,242	5,176	23,444	96	7	3	4	99·85	100·		·40	57·14				
12,443	23,642	39,175	562	8,777	4,310	1,603	99·45	60·07	28·55	1·40	13·22	140,517	28·27	1,976	·39
43,974	49,740	97,880	244	1,515	512	368	99·51	44·63		·34	24·29				

STATEMENT No. I.—Showing particulars of Vaccination in th

Number.	District.	Population of district according to the census of 1921.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary	
					Male.	Female.	Total.		Total.	
1	2	3	4	5	6			7	8	
Chota Nagpur Division.										
17	Hazaribagh ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	1,276,946	181	{ 5 43	1,119 16,826	822 15,721	1,941 32,547	388 757	1,643 32,547
18	Ranchi ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	1,334,473	187	{ 3 43	1,279 21,947	740 20,873	2,019 42,820	673 892	1,543 42,343
19	Palamau ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	733,394	149	{ 4 25	1,000 7,818	585 7,639	1,585 15,457	396 618	919 15,454
20	Manbhum ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	1,548,777	373	{ 32 42	15,965 17,193	12,448 15,898	28,413 33,091	887 787	20,004 32,993
21	Singbhum ...	{ By paid Vaccinators ... } { By licensed Vaccinators ... }	750,438	195	{ 3 20	1,344 7,644	495 7,291	1,839 14,935	613 747	650 14,446
Total of Chota Nagpur Division.		{ By paid Vaccinators ... } { By licensed Vaccinators ... }	5,653,028	208	{ 47 178	20,707 71,428	15,090 67,422	35,797 138,650	762 790	24,759 137,783
Total of Vaccine Department.		{ By paid Vaccinators ... } { By licensed Vaccinators ... } Total ...	34,002,180	409	{ 225 1,089 1,313	76,070 462,532 538,602	58,440 434,862 493,302	134,510 897,394 1,031,904	598 825 786	107,700 892,018 999,718
Total Dispensary Department		...	...	...	1	293	49	342	342	1
Total Railways (b)		...	...	...	...	440	335	775	...	767
Total Cooly Department		...	...	...	...	779	273	1,052	...	60
Total Jails and Cantonments		...	...	...	2	8,614	577	9,191	(a) 357	1,104
Grand Total		...	...	...	1,316	548,728	494,536	1,043,264	793	1,001,650

(a) Cantonments only.

(b) Vaccinated by Medical Officer.

districts of Bihar and Orissa during the year 1923-24—concl'd.

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
506	1,011	1,641	...	298	184	1	99·87	61·95	} 28·02 {	...	·33	} 52,258	25·26	117	·03
15,110	17,242	32,545	..	...	...	...	99·99	...		...	...
1,280	262	1,543	...	476	2	474	100·	100·	} 33·58 {	...	99·58	} 38,339	28·72	721	·54
33,309	9,017	42,340	1	477	334	96	99·99	87·66		·002	20·12				
367	471	862	43	666	110	512	98·40	71·43	} 22·45 {	4·67	76·87	} 18,695	25·49	522	·71
11,909	3,467	15,436	25	3	3	...	99·98	100·		·16	...				
4,661	13,267	19,227	531	8,409	6,429	659	93·60	82·95	} 37·46 {	2·65	7·63	} 46,966	30·32	201	·12
16,617	16,242	32,991	...	98	50	...	99·99	51·02		...	...		
303	301	627	3	1,189	505	41	96·90	51·82	} 21·14 {	·46	3·44	} 17,353	22·64	342	·45
9,234	5,123	14,409	3	489	340	9	99·76	70·83		·02	1·84				
7,212	15,312	22,900	577	11,038	7,320	1,687	94·69	78·28	} 29·83 {	2·33	15·28	} 153,611	27·17	1,903	·33
86,179	51,091	137,711	29	1,067	727	105	99·96	75·57		·02	9·90				
37,194	62,185	104,093	1,354	26,810	15,548	4,179	97·88	68·70	} 29·73 {	1·25	15·58	} 968,168	28·47	10,196	·29
337,933	532,653	888,273	1,104	5,376	2,997	561	99·70	62·24		·12	10·43				
375,127	594,638	992,366	2,458	32,186	18,545	4,740	99·50	67·56		·24	14·72				
...	...	1	...	341	49	...	100·	14·37	...	...	...	...	...	...	...
388	315	709	1	8	5	...	92·55	62·5	...	·13	...	...	...	...	...
...	...	...	60	992	288	704	...	100·	...	100·	70·96	...	...	...	...
413	199	1,018	41	8,087	4,050	1,122	95·76	58·14	...	3·71	13·87	...	...	...	...
375,928	595,352	994,094	2,560	41,614	22,937	6,566	99·49	65·44	...	·25	15·77	...	...	...	...

Summary.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
BY SPECIAL STAFF.												Rs. a. p.	Rs. a. p.
Statement (I) ...	999,718	32,186	999,718	32,186	99.50	67.56	1,313	736	375,127	54,838			
BY DISPENSARY STAFF.													
Statement III ...	1	341	1	341	100	14.37	1	342	...	...	29.73	1,52,979 14 0	0 2 4
BY OTHER AGENCIES.													
Railways, Cooly Depot, Jails and Cantonments.	1,931	9,087	1,931	9,087	94.42	59.81	2(a)	357	801	514			
Total ...	1,001,650	41,614	1,001,650	41,614	99.49	65.44	1,316	793	375,928	595,352	29.73	1,52,979 14 0	0 2 4

(a) Cantonments only.

STATEMENT II.

STATEMENT No. II.—*Showing the cost of vaccination in the*

No.	Circle and district.	European supervising officer.	Expen-										
			Pay.	Native supervising officer.	Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	PATNA DIVISION.				Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
1	Patna ... ..	...	...	5	2,560 0 0	20	2,021 0 0	63	336 0 0	...	...	2	50 0 0
2	Gaya ... ..	...	...	5	3,275 10 0	16	2,057 5 0	81	...	...	...	2	216 0 0
3	Shahabad ... ..	...	...	5	2,622 4 0	25	2,378 0 0	113	...	...	...	...	...
	Total of Patna Division ...	...	...	15	8,457 14 0	61	6,456 5 0	257	333 0 0	...	...	4	266 0 0
	TIRHUT DIVISION.												
4	Saran ... ..	...	...	4	2,011 10 0	8	978 12 0	79	...	...	...	...	...
5	Champaran ... ..	...	...	3	1,500 0 0	4	522 0 0	66	...	...	...	...	...
6	Muzaffarpur ... ..	...	...	4	3,062 14 0	12	1,674 3 0	79	...	...	...	...	...
7	Darbhanga ... ..	...	...	4	2,088 5 3	7	864 0 0	88	...	1	60 0 0	...	...
	Total of Tirhut Division ...	...	...	15	8,662 13 3	31	4,038 15 0	312	...	1	60 0 0	...	...
	BHAGALPUR DIVISION.												
8	Monghyr ... ..	...	...	4	1,920 0 0	7	831 4 3	30	...	...	...	2	111 0 0
9	Bhagalpur ... ..	...	...	5	3,580 6 0	12	1,068 7 0	63	...	...	...	...	...
10	Purnea ... ..	...	...	4	2,400 14 0	11	1,527 0 0	55	...	...	...	...	...
11	Santal Parganas ... ..	...	...	7	3,572 0 0	8	1,259 14 6	57	...	...	...	...	...
	Total of Bhagalpur Division ...	...	...	20	11,473 4 0	38	4,686 9 9	203	...	...	...	2	111 0 0
	ORISSA DIVISION.												
12	Cuttack ... ..	...	...	4	1,920 0 0	10	1,546 6 0	60	...	...	...	...	...
13	Balasore ... ..	...	...	3	1,560 0 0	6	867 9 0	32	450 0 0	...	...	...	...
14	Angul ... ..	...	...	3	2,886 0 0	...	...	12	160 0 0	...	...	...	...
15	Puri ... ..	...	...	3	1,680 0 0	29	3,776 3 6	...	...	...	...	...	...
16	Sambalpur ... ..	...	...	3	1,500 0 0	5	570 7 0	34	...	...	...	2	45 12 0
	Total of Orissa Division ...	...	...	16	9,600 0 0	50	6,751 8 6	138	630 0 0	...	...	2	45 12 0
	CHOTA NAGPUR DIVISION.												
17	Hazaribagh ... ..	...	...	4	2,560 8 0	5	1,005 0 0	43	...	...	...	...	...
18	Ranchi ... ..	...	...	4	2,400 3 0	4	747 12 9	48	...	...	...	...	...
19	Palamau ... ..	...	...	3	1,573 15 0	4	911 15 0	25	...	...	...	...	...
20	Manbhum ... ..	...	...	10	2,592 0 0	32	3,234 0 0	42	...	...	...	...	...
21	Singhbhum ... ..	...	...	3	1,440 0 0	3	291 0 0	20	...	...	...	...	...
	Total of Chota Nagpur Division ...	...	...	33	10,566 10 0	48	6,189 11 9	178	...	...	...	...	...
	Total of Vaccine Circle ...	...	...	99	48,760 9 3	228	28,123 2 0	1,088	966 0 0	1	60 0 0	8	423 12 0
	ESTABLISHMENT OF THE ASSISTANT DIRECTOR OF PUBLIC HEALTH, NORTH BIHAR CIRCLE.	...	...	1	12,180 9 0	...	...	...	...	2	1,300 2 0	2	215 6 0
	DITTO SOUTH BIHAR CIRCLE	...	...	1	11,200 0 0	...	...	...	...	2	1,260 0 0	2	209 13 3
	DITTO CHOTA NAGPUR AND ORISSA CIRCLE.	...	...	1	10,674 12 0	...	...	...	...	2	1,305 2 6	2	213 5 0
	Total ...	...	...	3	33,455 5 0	...	...	...	...	6	3,865 4 6	6	638 8 9
	Total of Province ...	...	...	102	82,215 14 3	228	28,123 2 0	1,088	966 0 0	7	3,925 4 6	14	1,061 4 9

Province of Bihar and Orissa during the year 1923-24.

Expenditure.					Paid from—							Number of all successful vaccinations and re-vaccinations.	Average cost of each successful case.
Total pay of establishment.	Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.			
13	14	15	16	17	18	19	20	21	22	23	24	25	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	
4,967 0 0	1,429 5 11	...	100 0 0	6,496 5 11	...	4,089 5 11	840 0 0	1,567 0 0	...	6,496 5 11	61,595	0 1 2	
5,548 15 0	684 10 3	...	222 1 0	6,455 10 3	...	4,079 14 3	1,597 13 9	777 14 3	...	6,455 10 3	51,137	0 2 0	
5,000 4 0	1,606 1 0	...	363 8 9	6,572 13 9	...	4,501 5 0	1,503 0 0	963 8 9	...	6,972 13 9	59,631	0 1 10	
15,516 3 0	3,723 1 2	...	685 9 9	19,924 13 11	...	12,670 9 2	3,915 13 9	3,308 7 0	...	19,924 13 11	172,393	0 1 10	
2,990 6 0	1,127 3 0	...	290 6 0	4,407 15 0	...	3,263 13 0	291 4 0	852 14 0	...	4,407 15 0	72,449	0 0 11	
2,022 0 0	941 6 0	...	134 15 0	3,098 5 0	...	2,561 3 0	183 0 0	354 2 0	...	3,098 5 0	45,103	0 1 1	
4,737 1 0	487 6 0	...	124 12 0	5,319 3 0	...	3,675 0 0	499 0 0	1,175 3 0	...	5,319 3 0	92,087	0 0 11	
3,012 5 3	1,392 6 4	...	140 0 0	4,544 11 7	...	3,570 11 7	...	974 0 0	...	4,544 11 7	93,651	0 0 9	
12,761 12 3	3,918 5 4	...	690 1 0	17,400 2 7	...	13,070 11 7	973 4 0	3,356 3 0	...	17,400 2 7	303,290	0 0 11	
2,862 4 3	1,560 0 0	...	219 9 6	4,641 13 9	...	3,570 0 0	446 0 0	625 13 9	...	4,641 13 9	70,828	0 1 0	
4,648 13 0	699 7 0	...	221 4 0	5,569 8 0	...	4,369 13 3	702 13 0	493 13 9	...	5,569 8 0	65,464	0 1 4	
3,927 14 0	1,288 11 0	...	228 8 3	5,445 1 3	...	3,709 9 0	531 0 0	1,094 8 3	...	5,445 1 3	35,218	0 2 5	
4,831 14 6	2,639 0 0	...	110 10 0	7,581 8 6	...	6,311 0 0	771 1 0	499 7 6	...	7,581 8 6	56,656	0 2 1	
16,270 13 9	6,187 2 0	...	779 15 9	23,237 15 6	...	18,020 6 0	2,500 14 3	2,716 10 15	...	23,237 15 0	227,566	0 1 7	
3,466 6 0	1,329 8 0	...	198 7 6	4,994 5 6	...	3,399 8 0	846 12 0	758 1 6	...	4,994 5 6	46,041	0 1 8	
2,877 6 0	775 0 3	...	70 0 0	3,722 9 3	...	2,808 5 0	628 4 3	286 0 0	...	3,722 9 3	30,195	0 1 11	
3,060 0 0	669 0 0	...	70 0 0	3,799 0 0	...	3,799 0 0	...	...	...	3,799 0 0	6,159	0 9 10
5,447 2 6	1,039 14 0	...	80 0 0	6,563 0 6	...	2,798 14 0	3,572 6 6	194 12 0	...	6,566 0 6	36,479	0 2 10	
2,176 3 0	942 4 0	...	128 8 6	3,246 15 6	...	2,632 4 0	424 3 0	200 8 6	...	3,246 15 6	23,757	0 2 2	
17,027 4 6	4,754 10 3	...	547 0 0	22,328 14 9	...	15,417 15 0	5,471 9 9	1,439 6 0	...	22,328 14 9	142,631	0 2 6	
3,565 8 0	566 11 0	...	104 2 3	4,236 5 3	...	3,227 2 6	470 0 0	539 2 9	...	4,236 5 3	35,784	0 1 10	
3,147 15 9	1,259 0 0	...	105 0 0	4,511 15 9	...	3,764 3 0	...	747 12 9	...	4,511 15 9	44,812	0 1 7	
2,465 14 0	864 1 0	...	113 12 0	3,463 11 0	...	2,504 14 0	573 9 9	385 3 3	...	3,463 11 0	16,466	0 3 4	
5,826 0 0	514 0 0	...	120 0 0	6,460 0 0	...	2,426 0 0	3,710 0 0	294 0 0	...	6,460 0 0	58,031	0 1 9	
1,731 0 0	625 14 0	...	50 4 0	2,407 2 0	...	2,115 14 0	60 0 0	231 4 0	...	2,407 2 0	16,058	0 2 4	
16,756 5 9	3,829 10 0	...	493 2 3	21,079 2 0	...	14,038 1 6	4,843 9 9	2,197 6 9	...	21,079 2 0	171,151	0 1 11	
78,332 7 3	22,442 12 9	...	3,195 12 9	1,03,971 0 9	...	73,217 11 3	17,735 3 6	13,018 2 0	...	1,03,971 0 9	1,017,031	0 1 7	
13,696 1 0	2,805 1 0	...	999 15 0	17,501 1 0	...	17,501 1 0	...	...	...	17,501 1 0	...	...
12,669 13 9	2,877 11 9	...	1,148 13 3	16,693 6 9	...	16,696 6 9	...	...	...	16,696 6 9	...	...
11,593 3 6	2,940 15 0	...	277 3 0	14,811 5 6	...	14,811 5 6	...	...	...	14,811 5 6	...	...
37,959 2 3	8,623 11 9	...	2,425 15 3	49,008 13 3	...	49,008 13 3	...	...	...	49,008 13 3	...	...
1,16,291 9 6	31,066 8 6	...	5,621 12 0	1,52,979 14 0	...	1,22,226 8 6	17,753 6	13,018 2 0	...	1,52,979 14 0	1,017,031	0 2 4	

B.—DISPENSARY VACCINATION.

STATEMENT No III.—Showing Dispensary Vaccination in the Province of Bihar and Orissa during the year 1923-24.

District.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination.					Re-vaccination.			Percentage of successful cases in which the results were known.		Percentage of unknown cases to total cases.	
					Total.	Successful.			Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
						Under one year.	One and under six years.	Total of all ages.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Patna ...	1	1	342	342	1	...	...	1	...	341	49	...	100	14.37	...	...
Gaya
Shahabad
Saran
Champaran
Muzaffarpur
Darbhanga
Monghyr
Bhagalpur
Purnea
Santal Parganas
Cuttack
Balasore
Angul
Puri
Sambalpur
Hazaribagh
Ranchi
Palamau
Manbhum
Singhbhum
Total ...	1	1	342	342	1	...	...	1	...	341	49	..	100	14.37	...	...

COMPARATIVE STATEMENT No. IV.

COMPARATIVE STATEMENT NO. IV.—Showing the number of persons primarily vaccinated, and the number of those per-

Establishment.			Persons primarily							
			1914-15		1915-16		1916-17		1917-18	
			Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
1			2	3	4	5	6	7	8	9
Government	...	...	649	515	10,277	10,046	3,963	3,441	6,984	6,050
Municipal	...	...	47,235	45,310	43,499	41,661	38,645	37,226	37,586	36,107
Local Fund	...	...	76,264	75,266	94,056	84,636	80,353	73,103	82,772	77,911
Dispensaries	...	...	178	176	285	215	202	202	181	177
Licensed Vaccinators	...	...	1,114,753	1,109,554	1,065,623	1,059,266	922,991	913,264	931,549	926,281
Total	...	...	1,239,079	1,230,821	1,212,740	1,195,824	1,046,154	1,027,236	1,059,072	1,046,526

sons who were successfully vaccinated in the Province of Bihar and Orissa in each of the undermentioned official years.

vaccinated.

1918-19		1919-20		1920-21		1921-22		1922-23		1923-24.	
Total number.	Number successfully vaccinated	Total number.	Number successfully vaccinated	Total number.	Number successfully vaccinated.	Total Number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
10	11	12	13	14	15	16	17	18	19	20	21
6,637	5,941	7,363	6,520	1,927	1,831	891	825	794	735	1,104	1,018
36,573	35,213	36,810	35,428	32,858	31,541	31,136	30,040	29,927	28,963	33,760	32,833
59,639	56,495	69,847	66,946	80,337	77,939	71,144	68,523	70,386	67,809	74,767	71,969
139	139	178	178	262	262	...	...	...	...	1	1
816,096	811,506	811,168	806,217	854,339	848,948	800,424	797,357	865,920	862,260	8,92,018	8,88,273
919,084	903,294	925,366	915,289	969,723	960,521	903,595	896,745	967,027	9,59,767	10,01,650	9,94,094

STATEMENT NO. V—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.				By Assistant Director or Civil	
			Assistant Directors of Public Health.		Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
		3	4	5	6	7	8	9	10	11	12	13
Patna ...	62,514	553	9,756	...	650	341	14,379	...	15,975	...	15.60	...
Gaya ...	50,923	819	10,319	...	311	688	6,910	...	18,606	...	20.26	...
Shahabad ...	59,779	20	2,658	...	2,545	...	6,683	...	16,899	...	4.44	...
Saran ...	73,351	615	1,851	...	3,350	...	2,774	...	12,280	...	2.52	...
Champaran ...	44,230	1,055	2,740	...	409	...	15,054	...	22,198	26	6.19	...
Muzaffarpur ...	92,124	765	5,297	...	8,129	381	15,085	...	29,270	3	5.74	...
Darbhanga ...	92,905	1,241	4,508	...	3,947	...	19,588	211	30,743	...	4.85	...
Monghyr ...	70,826	122	2,971	...	1,816	...	12,947	73	23,634	17	4.19	...
Bhagalpur ...	62,975	4,991	2,682	...	3,047	577	10,356	...	24,846	...	5.84	...
Purnea ...	35,033	943	1,747	...	441	...	7,354	...	11,650	...	4.97	...
Santal Parganas ...	5,583	3,271	5,743	...	3,543	394	6,297	418	19,569	528	10.42	...
Juttack ...	44,221	1,684	3,214	...	...	745	6,935	248	8,693	767	7.26	...
Balasore ...	22,410	4,732	876	...	1,202	44	3,642	332	7,714	506	3.08	...
Angul ...	6,335	409	...	...	584	...	1,613	...	5,289	31	...	...
Puri ...	35,892	2,451	347	...	167	449	6,455	648	12,988	866	2.96	...
Bambalpur ...	23,815	133	986	...	1,519	108	5,907	...	6,974	...	4.14	...
Hazaribagh ...	34,964	1,273	7,525	...	1,735	603	5,865	...	10,462	15	21.52	...
Ranchi ...	44,168	1,494	1,064	...	1,850	...	8,215	538	13,128	...	2.40	...
Palamau ...	16,451	1,191	1,423	...	2,975	170	5,345	50	5,761	9	8.64	...
Manbhum ...	53,010	9,014	3,624	...	1,292	...	10,000	...	23,264	7,151	6.83	...
Singhbhum ...	16,026	1,781	1,484	...	843	166	3,596	812	2,335	39	0.83	...
Total ...	1,001,650	41,014	71,814	...	40,985	4,686	174,801	3,330	323,478	9,968	7.16	...

verified by Inspecting Officers during the year 1921-22.

Inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.								Percentage of successful cases reported by vaccinators.	
By Assistant Directors of Public Health or Civil Surgeons.		By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Civil Surgeons.				By Native Superintendents or other Inspecting Officers.					
Civil Surgeons.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Civil Surgeons.		District Inspectors.		Sub-Inspectors.			
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1.03	61.66	23.98	...	25.55	...	96.10	...	100.	100.	100.	...	100.	...	98.23	29.83
.61	84.00	13.56	...	36.53	...	95.09	...	93.89	48.72	98.36	...	98.43	...	99.69	46.67
4.25	...	11.17	...	28.27	...	89.16	...	97.83	...	75.86	...	96.58	...	97.77	80.00
4.56	...	3.78	...	18.10	...	85.40	...	98.05	...	98.30	...	97.56	...	98.38	49.27
.92	...	34.03	...	50.18	1.57	86.78	...	100.	...	90.64	...	91.52	88.40	99.63	69.11
9.4	49.80	16.37	...	31.77	.39	95.07	...	99.97	23.88	99.09	...	98.92	100.	99.54	49.67
4.24	...	20.86	17.00	33.09	...	90.43	...	99.84	...	99.19	54.24	99.57	...	99.85	73.59
2.56	...	18.24	59.83	33.36	13.93	88.08	...	99.72	...	99.92	65.75	99.71	17.64	99.95	23.68
4.83	11.56	16.44	...	39.45	...	85.14	...	99.27	27.20	98.25	...	97.90	...	99.83	00.89
1.25	...	20.96	...	33.20	...	82.19	...	100.	...	97.13	...	98.97	...	99.43	35.20
6.49	12.04	11.53	12.77	35.85	16.44	81.99	...	97.48	47.46	95.63	45.61	98.59	73.07	...	...
...	18.24	15.62	6.07	20.10	18.78	92.99	...	...	58.25	90.38	68.54	82.55	7.20	99.71	47.52
4.22	.92	12.81	6.04	27.15	10.58	78.19	...	99.41	68.18	98.87	34.57	97.71	91.30	99.40	46.80
8.90	...	25.46	...	83.48	7.57	...	...	98.58	...	96.90	...	96.12	45.16	97.04	70.27
1.30	18.26	17.98	26.36	36.19	35.23	95.10	...	91.22	60.13	98.91	55.09	99.37	47.34	98.05	52.08
6.37	81.20	24.80	...	29.28	...	92.90	...	97.76	65.74	97.37	...	95.64	...	99.44	55.63
5.10	47.36	16.77	...	29.92	1.17	98.14	...	99.83	67.27	98.60	...	97.26	80.	99.98	44.08
4.18	...	18.59	36.01	29.72	...	91.16	...	100.	...	98.73	53.71	98.41	...	99.99	43.57
18.08	14.27	32.40	4.19	35.01	.75	97.11	...	100.	20.58	99.55	40.00	99.23	23.22	99.08	13.93
2.43	...	18.95	...	43.88	79.33	94.23	...	85.75	...	98.92	...	94.28	63.03	99.98	64.80
5.58	10.44	23.82	45.59	15.46	2.18	94.81	...	98.93	56.98	99.15	59.11	99.57	84.61	99.60	57.38
4.09	11.26	17.45	8.00	32.29	23.95	92.44	...	98.66	52.58	98.83	53.93	97.31	73.55	99.27	50.89

STATEMENT NO. FI—Showing side by side the ratios, per 1,000 of population, of Deaths from

District.	1914-15.		1915-16		1916-17		1917-18	
	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
1	2		4	5	6	7	8	9
Patna ...	·48	57,665	·71	68,438	·28	67,870	·15	68,529
Gaya ...	·10	65,855	·68	75,641	·37	56,139	·18	62,246
Shahabad ...	·32	62,079	·45	65,016	·26	51,176	·10	51,858
Saran ...	·06	80,729	·15	79,608	·27	74,895	·16	77,721
Champaran ...	·10	64,146	·14	68,255	·07	49,091	·11	51,755
Muzaffarpur ...	·09	105,292	·24	104,624	·20	88,702	·09	85,898
Darbhanga ...	·24	97,760	·41	95,237	·28	96,020	·07	93,206
Monghyr ...	·46	89,749	·42	87,999	·17	67,229	·10	68,361
Bhagalpur ...	·35	75,831	·38	74,532	·22	66,899	·22	68,166
Purnea ...	·30	58,496	·38	51,206	·33	53,018	·64	49,490
Santal Parganas ...	·18	53,182	·37	57,558	·43	46,826	·14	56,728
Cuttack ...	·06	113,297	·69	89,925	·46	73,415	·81	62,177
Balasore ...	·90	53,281	·90	38,609	·24	22,178	·03	25,800
Angul ...	...	7,680	·01	9,686	·15	9,226	·01	6,956
Puri ...	·02	33,820	·30	37,595	·52	29,228	·26	34,639
Sambalpur ...	·02	27,561	·75	22,606	1·09	19,938	·24	23,345
Hazaribagh ...	·03	48,299	·49	46,709	·19	42,148	·07	39,761
Ranchi ...	·03	50,958	·12	52,111	·05	46,667	·03	47,094
Palamau ...	·10	28,327	·17	31,808	·15	25,542	·06	26,893
Manbhum ...	·43	73,369	·63	54,056	·23	49,379	·02	52,289
Singhbhum ...	·45	25,909	·28	19,526	·12	17,429	·09	17,872
Total ...	·22	1,273,285	·42	1,230,745	·28	1,053,015	·19	1,070,784

Small-pox and the number of successful vaccinations during the ten years ending 1923-24.

1918-19		1919-20		1920-21		1921-22		1922-23.		1923-24.	
Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.	Ratio of deaths from small-pox.	Number of successful vaccinations.
10	11	12	13	14	15	16	17	18	19	20	21
·13	68,535	·85	68,573	2·79	71,340	·46	63,297	·05	62,673	·06	61,595
·21	56,114	·62	66,449	·77	60,938	·24	42,710	·01	47,263	·04	51,137
·02	41,625	·24	42,394	·55	62,418	·22	69,010	·04	58,782	·02	59,661
·07	66,443	·10	66,882	·39	68,000	·13	37,665	·02	66,871	·05	72,449
·14	50,191	·13	53,458	·29	56,914	·08	36,927	·06	44,499	·09	45,103
·02	86,664	·10	87,182	·13	89,230	·04	82,124	·04	86,141	·12	92,087
·08	36,555	·10	88,770	·17	93,463	·03	88,504	·06	88,182	·05	93,651
·05	56,576	·24	59,814	·28	55,104	·14	54,215	·11	62,958	·09	70,828
·09	59,034	·23	56,741	·22	58,176	·13	62,115	·09	64,294	·48	65,464
·52	54,209	·96	50,349	·98	51,930	·29	36,428	·24	38,977	·06	35,218
·06	46,659	·30	44,691	·37	45,864	·05	50,187	·01	55,085	·03	56,056
·89	51,845	·91	55,008	·30	60,775	·04	61,424	·15	61,752	·28	46,041
·09	20,942	·86	22,139	·54	27,597	·09	26,380	·17	23,541	·37	30,195
·06	6,751	1·11	5,739	...	4,060	...	4,968	·005	5,511	...	6,159
·75	33,543	3·12	32,940	·77	41,225	·08	34,897	·13	35,208	·25	36,479
·07	15,361	·68	13,835	·27	18,523	·03	20,829	·006	18,791	·01	23,757
·07	35,632	·24	35,026	·13	29,123	·02	29,524	·02	31,985	·03	35,784
·04	31,870	·90	40,559	1·38	38,450	·21	38,997	·05	41,821	·01	44,812
·06	20,472	1·26	21,226	1·76	19,346	·56	16,898	·09	15,585	·04	16,466
·05	37,807	·44	57,908	·11	43,192	·02	43,484	·02	52,438	·01	58,031
·10	15,542	1·24	19,595	·52	18,023	·32	16,605	·18	16,998	·14	16,058
·17	942,370	·53	989,278	·56	1,013,696	·14	917,188	·07	979,351	·11	1,017,031

STATEMENT No. VII--Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24.

District.	Towns.	Number of births during the year ending 31st March 1924.	Number of deaths amongst infants under one year during the year ending 31st March 1924.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1924.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna ...	3,951	702	919	1st October 1884.
	Bihar ...	883	138	257	1st April 1887.
	Dinapur ...	1,181	237	556	28th January 1891.
	Barh ...	300	80	149	1st April 1887.
	Khagole ...	287	64	15	12th July 1910.
	Total ...	6,602	1,221	1,936	
Gaya	Gaya ...	1,865	734	1,106	1st January 1883.
	Tikari ...	213	29	37	3rd January 1891.
	Daudnagar ...	319	66	231	Ditto.
	Total ...	2,397	829	1,374	
Shahabad	Arrah ...	1,355	229	877	20th July 1885.
	Buxar ...	374	85	263	1st April 1887.
	Dumraon ...	761	104	299	Ditto.
	Jagadispur ...	328	51	258	20th December 1890.
	Sassaram ...	887	161	319	1st April 1887.
	Bhabhua ...	167	34	82	Ditto.
	Total ...	3,872	664	2,098	
Total of Patna Division.		12,871	2,714	5,468	
Saran	Chapra ...	1,556	...	906	1st April 1887.
	Revelganj ...	362	77	264	12th December 1890.
	Siwan ...	444	52	338	1st April 1887.
	Total ...	2,362	129	1,508	
Champanan	Motihari ...	422	64	312	1st April 1887.
	Bettiah ...	865	148	257	Ditto.
	Total ...	1,287	212	569	

STATEMENT No. VII—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24—contd.

District.	Towns.	Number of births during the year ending 31st March 1924.	Number of deaths amongst infants under one year during the year ending 31st March 1924.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1924.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur ...	1,361	268	435	1st January 1886.
	Sitamarhi ...	301	30	171	1st April 1887.
	Hajipur ...	686	146	183	1st May 1890.
	Lalganj ...	306	38	122	1st April 1887.
	Total ...	2,654	482	911	
Darbhanga	Darbhanga ...	1,947	265	376	24th May 1884.
	Roserha ...	505	61	60	3rd January 1891.
	Samastipur ...	342	49	25	25th July 1910.
	Madhubani ...	455	36	125	1st April 1887.
	Total ...	3,249	411	586	
	Total of Tirhut Division.	9,552	1,234	3,574	
Monghyr	Monghyr ...	1,833	333	338	15th November 1882.
	Jamalpur ...	1,037	191	515	Ditto.
	Total ...	2,870	524	853	
Bhagalpur	Bhagalpur ...	1,760	326	924	15th February 1884, withdrawn on 16th October 1895; re-extended on 18th August 1898.
	Colgong ...	128	36	44	Ditto, re-extended on 19th December 1901.
	Total ...	1,888	362	968	
Purnea	Purnea ...	294	36	168	1st July 1887.
	Kishanganj ...	132	16	120	12th November 1892.
	Katihar ...	284	16	130	8th August 1910.
	Forbesganj ...	127	13	102	9th August 1912.
	Total ...	837	81	520	

STATEMENT No. VII—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24—contd.

District.	Towns.	Number of births during the year ending 31st March 1924.	Number of deaths amongst infants under one year during the year ending 31st March 1924.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1924.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas ...	Sahibganj ...	522	82	238	1st May 1884.
	Deoghar ...	279	42	71	Ditto.
	Madhupur ...	216	54	76	22nd August 1910.
	Dumka ...	197	45	160	Notifications, dated the 9th April 1884, and 23rd August 1910.
	Total ...	1,214	223	545	
	Total of Bhagalpur Division.	6,809	1,190	2,886	
Cuttack ...	Cuttack ...	996	180	199	1st September 1884.
	Kendrapara ...	328	109	38	7th February 1888.
	Jajpur ...	294	73	73	Ditto.
	Total ...	1,618	362	310	
Balasore ...	Balasore ...	330	76	155	7th February 1888.
Puri ...	Puri ...	714	275	273	Ditto.
Sambalpur ...	Sambalpur ...	352	73	182	7th March 1895.
	Total of Orissa Division.	3,014	786	920	
Hazaribagh ...	Hazaribagh ...	475	42	187	1st January 1885.
	Chatra ...	324	7	141	1st August 1885.
	Giridih ...	547	42	152	8th September 1910.
	Total ...	1,346	91	480	
Ranchi ...	Ranchi ...	1,295	114	1,167	1st April 1887.
	Lohardaga ...	207	24	113	25th June 1892.
	Total ...	1,502	138	1,280	

STATEMENT NO. VII—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1923-24—concl'd.

District.	Towns.	Number of births during the year ending 31st March 1924.	Number of deaths amongst infants under one year during the year ending 31st March 1924.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1924.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Palamau	Daltonganj	231	49	118	9th October 1890.
Manbhum	Purulia	496	63	220	1st January 1887.
	Raghunathpur	163	22	51	9th February 1894.
	Jhalda	196	13	31	9th July 1892.
	Dhanbad	220	25	8	5th December 1918.
	Total	1,075	123	310	
Singhbhum	Chaibassa	260	38	120	20th June 1892.
	Chakradharpur	106	11	122	13th January 1919.
	Total	366	49	242	
	Total of Chota Nagpur Division.	4,520	450	2,430	
	Total for the Province	36,766	6,374	15,278	

Provincial Statement showing the different kinds of lymph

District.	Primary vaccination.											
	Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm	
	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna	62,514	61,430	887	197	98.26	...	...
Gaya	50,923	50,763	122	38	99.63	...	...
Shahabad	59,779	59,645	113	21	99.77	...	...
Saran	73,351	72,146	803	402	98.35	...	...
Champan	44,230	44,068	114	48	99.63	...	...
Muzaffarpur	92,124	91,707	386	31	99.54	...	...
Darbhanga	92,905	92,775	123	7	99.86	...	...
Monghyr	70,826	70,793	29	4	99.95	...	...
Bhagalpur	62,975	62,865	48	62	99.82	...	...
Purnea	35,083	34,886	168	29	99.43	...	...
Santal Parganas	54,583	54,333	129	121	99.54	...	...
Cuttack	44,226	44,100	25	101	99.71	...	...
Balasore	28,410	27,957	300	153	98.40	...	...
Angul	6,335	6,133	145	57	96.81	...	...
Puri	35,882	35,184	184	514	98.05	...	...
Sambalpur	23,815	23,683	36	96	99.44	...	...
Hazaribagh	34,964	34,900	61	3	99.81	...	...
Ranchi	44,168	44,161	3	4	99.98	...	...
Palamau	16,451	16,300	18	133	99.08	...	...
Manbhum	53,010	51,229	1,248	533	96.64	...	...
Singhbhum	15,096	15,036	54	6	99.60	...	...
TOTAL	10,01,650	9,94,094	4,996	2,560	99.24	...	...

II.

used and their rates of success during the year 1923-24.

			Re-vaccination.														
vaccination.			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	553	165	379	9	29.83	...	...	...	...	...
...	819	374	345	100	45.66	...	...	...	...	...
...	20	16	4	...	80.00	...	...	...	...	...
...	615	303	193	119	49.26	...	...	...	...	...
...	1,655	1,035	349	271	62.53	...	...	...	...	...
...	765	380	274	111	49.67	...	...	...	...	...
...	1,241	876	361	4	70.58	...	...	...	...	...
...	122	35	82	5	28.68	...	...	...	...	...
...	4,991	2,599	1,983	409	52.07	...	...	...	...	...
...	943	332	468	143	35.20	...	...	...	...	...
...	3,271	1,723	1,047	501	52.67	...	...	...	...	...
...	4,084	1,941	1,679	464	47.52	...	...	...	...	...
...	4,782	2,238	1,365	1,179	46.80	...	...	...	...	...
...	409	26	8	375	6.35	...	...	...	...	...
...	2,458	1,295	771	392	52.68	...	...	...	...	...
...	133	74	38	21	55.63	...	...	...	...	...
...	1,273	884	312	77	69.44	...	...	...	...	...
...	1,494	651	193	650	43.57	...	...	...	...	...
...	1,191	166	100	925	13.93	...	...	...	...	...
...	9,014	6,802	1,460	752	75.46	...	...	...	...	...
...	1,781	1,022	700	59	57.38	...	...	...	...	...
...	41,614	22,937	12,111	6,566	55.11	...	...	...	...	...



